Command in the Objective Force

A Monograph
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Abstract

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This paper seeks to answer what type of command will best serve the Army's Objective Force in gaining the initiative, building momentum, and exploiting success to achieve land dominance in the future by synchronizing forces and by making better decisions than an opponent. Current U.S. Army doctrine outlines two variations of command in Field Manual 6-0, *Command and Control*; mission command and detailed command. Throughout this manual, there is a high degree of emphasis upon mission command. The U.S. Army is currently transforming to the Objective Force and continues the emphasis upon mission command as the dominant type of command.

The Objective Force contains many new concepts and will field new systems that will take advantage of information age technology. The Objective Force command and control system will have multiple, interconnected sensors, live video feeds, and automatic, multi-echelon data sharing that will allow all levels to access a common operational picture (COP), thus enhancing or ensuring situational understanding throughout the force. This monograph uses both Joint and Army Vision statements to provide information of what the future force's capabilities will be and how the Objective Force is expected to accomplish its missions.

In order to establish a foundation to understand why mission and detailed command have been used in the past, several historical examples are analyzed. Detailed command was prevalent in the pre-Napoleonic Age when armies were relatively small and battles were waged under the purview of a single commander. The example used in this monograph, of a military effectively and successfully using detailed command, is the Roman Army. Within the last 200 years, the increased lethality of weapons has brought a concomitant increase in the dispersal of militaries. Many militaries, including the U.S. Army, have adopted mission command to deal with the problem of effectively commanding these dispersed military forces. The classic example of a military effectively using mission command is the German Army during World War II. The advantages and disadvantages of each type of command in each historical example is discussed and assessed in accordance with the current principles of battle command: visualize, describe, and direct. The ability or inability of a commander to visualize, describe and direct by obtaining and using accurate information and in a timely manner is shown as a primary reason for the adoption of mission or detailed command.

The increased capabilities envisioned in the Objective Force will provide the entire force with a high degree of situational understanding. This will allow the Objective Force to accomplish new concepts like dominant maneuver and precision engagement. The Objective Force command and control system will allow commanders to visualize the battlespace like commanders were able to in the pre-Industrial Age. The increase in situational understanding brought about by information superiority will enable the objective force to synchronize operations to a high degree. Although the official publications discussing the Objective Force continue to emphasize the importance of mission command, this paper argues that both types of command, mission and detailed, can and will be used throughout the force. For most of the force and for most of the time, mission command will continue to be the best type of command that will allow subordinates to make better decisions faster than an adversary. There are, however, instances where the Objective Force could and should adopt detailed command in order to synchronize forces to a high degree or to adapt to a rapidly changing situation. In each instance, the Objective Force commander must be able to visualize the entire battlefield, using the COP. The communication system must also allow that commander to communicate rapidly so that he can describe his vision and direct his subordinates to act quicker than his opponent.

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CHAPTER ONE

INTRODUCTION

The U.S. military is currently undergoing a process of transformation. In the Army, the goal of this transformation is to change to the Objective Force: a force that is strategically responsive and dominant at every point on the spectrum of operations.[1] There is a great amount of official Army publications and literature that outline the future force's capabilities. Where this literature does address command, it almost exclusively continues to adhere to the current Army emphasis on mission command.[2]

This paper addresses whether this type of command is the most effective type of command in the future Objective Force and is based upon the implementation of the various types of command throughout history. The primary focus of this study is on major theater conflict at the operational and tactical levels, but some implications and observations may be applicable for operations across the spectrum of operations.

The Army's primary mission is to fight and win the nation's wars and achieve directed national objectives.[3] The primary way of accomplishing this is to dominate land operations.[4] Land combat operations usually involve destroying or dislocating enemy forces on land or taking key objectives that reduce the enemy's effectiveness to conduct operations immediately or in the future.[5] The key to doing this is to aggressively gain the initiative, build and maintain momentum, and exploit success in order to control the nature, scope, and tempo of operations.[6]

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[1] Headquarters, Department of the Army, *Army Transformation Roadmap* (Washington, D.C.: GPO, n.d.), viii. The spectrum of operations as outlined in *Field Manual 3-0* are: Offense, Defense, Stability, and Support.

[2] See Headquarters, Department of the Army, *U.S. Army White Paper: Concepts for the Objective Force* (Washington, D.C.: GPO, n.d.), 7-8.

[3] Headquarters, Department of the Army, *Field Manual 3-0, Operations* (Washington, D.C.: GPO, June 2001), 1-2.

[4] Ibid, 1-6.

[5] Headquarters, Department of the Army, *Field Manual 6-0, Command and Control (DRAG Edition)* (Washington, D.C.: GPO, March 2001), 1-11.

[6] U.S. Army, *FM 3-0, Operations*, vii.

This paper is ultimately concerned with what command type will best serve the Army in gaining initiative, building momentum, and exploiting success to achieve land dominance in the future.

The U.S. Army defines Command as the authority that a commander lawfully exercises over subordinates by virtue of rank or assignment.[7] Command includes the authority and responsibility for effectively using available resources for planning the employment of, organizing, directing, coordinating, and controlling military forces for the accomplishment of assigned missions.[8] One of the three sub-elements of command is decisionmaking, defined by the Army as the commander selecting a course of action (COA) as the one most favorable to accomplish the mission.[9] Decisionmaking translates the commander's vision into action.

Current U.S. Army doctrine outlines two variations of command in *Field Manual 6-0, Command and Control*; mission command and detailed command.[10] According to current army doctrine, detailed command centralizes information and decision making authority.[11] Mission command entails conducting operations through decentralized execution based on mission orders. This results in subordinates at all levels exercising disciplined initiative within the commander's intent to accomplish missions.

Although these two types of command appear to be diametrically opposed to each other, in reality they are two sides in a range of command. Mission command and detailed command are relative definitions describing the two sides of command. Although absolute versions of each type of command can be envisioned, most command throughout history lies between the two absolutes. Because they fall on one side of the range or the other, they are characterized as mission or detailed command.[12]

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[7] U.S. Army, *FM 6-0, Command and Control (DRAG Edition)*, 1-4.
[8] Ibid.
[9] Ibid.
[10] Ibid, 1-12 to 1-13.
[11] Ibid., 1-14.
[12] This concept is not clearly articulated in any doctrinal manual but becomes evident when different types of command employed throughout history, as well as new ideas such as Swarm Theory, are compared with each other. Robert Leonhard approaches the concept of a "Range of Command" in discussing command and control theory. See Robert R. Leonhard. *Fighting by Minutes: Time and the Art*

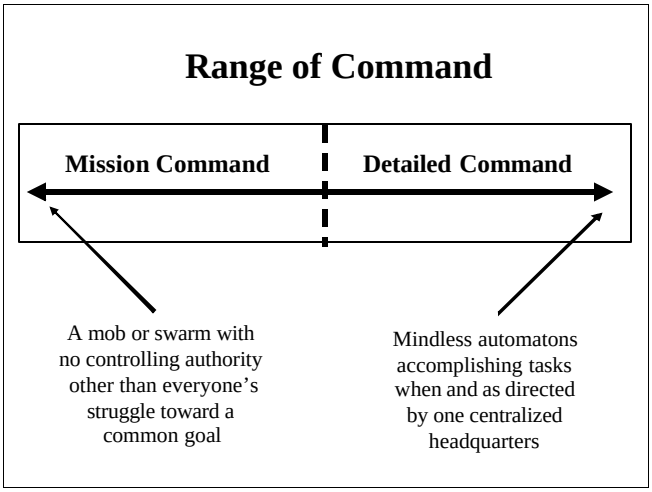

Figure 1. Range of Command with Polar Extremes

The U.S. Army officially adheres to mission command as the preferred type of command in current Army operations.[13] This is codified in the DRAG edition of *Field Manual 6-0*. A great deal of Post-World War II literature is available on the subject of mission command. Virtually all of this literature justifiably upholds mission command as a powerful tool to gain an advantage over the enemy. This concept stems from the German idea of *Auftragestaktik*, commonly translated as mission oriented command. There is such a large amount of literature, official and unofficial, that continually emphasizes the importance of mission command, that this type of command is nearly dogmatic within the U.S. Army.[14] Because of this, any prognostication of command in the future slavishly endorses further reliance upon mission command without taking

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of War. With a foreword by Colonel James R. McDonough. (Westport, Connecticut: Praeger, 1994), 107-134.

[13] U.S. Army, *FM 6-0, Command and Control (DRAG Edition)*, 1-14 to 1-19, 2-5 to 2-9, 2-19 to 2-21, 3-6 to 3-8, 4-9 to 4-10. That Mission Command is the preferred type of command within the Army is not explicitly stated but even a casual reading will validate this assertion. Simply perusing the principles of command and control confirms this.

[14] See Leonhard. *Fighting by Minutes*, 117. Leonhard states that "Mission tactics in the U.S. Army in no longer a doctrine. It is a religion." As will be shown, current doctrinal publications continue to exclusively endorse mission command either explicitly or implicitly, while detailed command is discussed dismissively.

into account any realistic appraisal of which type of command will most effectively and efficiently accomplish given missions at different levels of war.

There are good reasons for adhering to, and endorsing the adoption of, mission command. There are also good reasons for discarding detailed command, especially after thoroughly studying the evolution of command since the Industrial Revolution. *Field Manual 6-0* sees detailed command as a command by plan that centralizes the execution of the operation at higher levels prior to its execution.[15] By doing so, detailed command leaves little room for adjustments by subordinates after the operation has commenced without referring to headquarters.[16] However, contrary to the limited definition of detailed command contained in *Field Manual 6-0*, this type of command, like mission command, can be exercised during the execution of an operation. Whether it can be exercised effectively is another matter entirely.

U.S. Army doctrine outlines five principles of command that serve to further implicitly reinforce the emphasis on mission command. The principles are: unity of effort, decentralized execution, trust, mutual understanding, and timely and effective decisionmaking.[17] In defining each principle, *Field Manual 6-0* links the principles solely with mission command and fails to mention detailed command, making it obvious that mission command is viewed as the preferred type. *Field Manual 6-0* provides the cogent explanation for excluding any type of detailed command by stating that decentralized execution is essential to gaining and maintaining the

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[15] U.S. Army, *FM 6-0, Command and Control (DRAG Edition),* 1-14 to 1-15.

[16] Ibid., 1-15.

[17] Ibid, 2-6 to 2-12. *FM 6-0* defines the principles and links them with mission command: Unity of effort is coordination and cooperation among all forces toward a commonly recognized objective, even if the forces are not necessarily part of the same command structure. Decentralized execution allows and requires subordinates to use their initiative to make appropriate decisions to further their higher commander's intent. Trust, a cornerstone of leadership and mission command, must go up and down the chain of command. Subordinates will more willingly exercise the initiative required in mission command when the commander trusts them. Mutual understanding both supports and derives from trust. Only with mutual understanding can subordinates and leaders conduct operations under mission command in a cohesive and effective manner. Timely and effective decisions and actions are about making and communicating decisions faster than the enemy can react effectively which creates a tempo with which the enemy cannot compete. Mission command makes it easier to get timely decisions and actions that create and exploit the advantage.

tactical initiative in dynamic operations and environments of high uncertainty.[18] This is undeniably true today, but will it always continue to be true? Also, a key word in the definition of this principle is tactical. *Field Manual 6-0* excludes any other level of war in validating this as a principle.[19]

It is clear that current doctrine endorses the use of mission command. The emphasis on mission command is continued in official Army publications outlining the Objective Force concepts. This literature states that the future will require an increased reliance on mission command and implies an even higher degree of mission command use at all levels.[20]

During conflict, the commander exercises the concept of battle command. This is principally an art that employs skills developed by professional study, constant practice, and considered judgment.[21] Effective battle command demands decisions that are both timely and more effective than those of the enemy.[22]

The Army's current framework to assist a commander in exercising effective battle command is: visualize, describe, and direct.[23] The commander first visualizes the current status of friendly and enemy forces, as well as terrain and any other factors which may affect the

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[18] Ibid, 2-7.

[19] Joint Publications do not define or discuss command in terms of mission or detailed command. For example *Joint Publication 6-0, Doctrine for Command, Control, Communications, and Computer (C4) Systems Support to Joint Operations*, discusses systems and not command. Several Joint Publications discuss the concept of Unified Action. This is a broad generic term referring to the wide scope of activities (including the synchronization the activities of governmental and nongovernmental agencies) taking place within unified commands, subordinate unified commands, or joint task forces under the overall direction of the commanders of those commands. See U.S. Joint Chiefs of Staff, *Joint Publication 0-2, Unified Action Armed Forces (UNAAF)*, (Washington, D.C.: GPO, 24 February 1995), I-4 to I-5; idem, *Joint Publication 1, Joint Warfare of the Armed Forces*, (Washington, D.C.: GPO, 14 November 2000), V-7; idem, *Joint Publication 6-0, Doctrine for Command, Control, Communications, and Computer (C4) Systems Support to Joint Operations*, (Washington, D.C.: GPO, 30 May 1995), vii – xiii.

[20] U.S. Army, *Concepts for the Objective Force*, 7-8.

[21] See U.S. Army, *FM 6-0, Command and Control (DRAG Edition)*, 4-23 thru 4-25; idem., *FM 3-0, Operations*, 5-1.

[22] U.S. Army, *FM 3-0, Operations*, 5-2.

[23] See U.S. Army, *FM 6-0, Command and Control (DRAG Edition)*, 4-3 thru 4-14; idem., *FM 3-0, Operations*, 5-2.

mission. He then uses this thorough situational understanding to determine the end state and then identifies ways of getting from the present state or position to the end state.[24]

The commander then needs to describe his visualization to his subordinates. According to doctrine, the commander uses some commonly understood framework of the battlefield to assist in describing his visualization.[25] Additionally, he expresses his vision as the commander's intent which helps direct his subordinates toward mission accomplishment.[26] In order to help focus his staff, the commander also issues planning guidance and uses Commander's Critical Information Requirements (CCIR) to help the staff focus the collection of information to support his visualization.[27] Much of the doctrinal literature concerning the commander describing his visualization deals with actions and processes that occur prior to a mission, not during the execution of it.[28] It must be assumed, however, that in a fluid, rapidly changing battlefield, the commander could, would, and must continually and repeatedly describe new visualizations that evolve from changing circumstances.

The final step in the framework is directing. The commander directs when he decides on the course of action and communicates that decision to subordinates.[29] Much of the doctrinal literature on this subject mentions the development of the concept of the operation and the

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[24] See U.S. Army, *FM 3-0, Operations*, 5-6; idem, *FM 6-0, Command and Control (DRAG Edition)*, 4-3, 4-6. *FM 3-0* defines endstate as: "At the operational and tactical levels, the end state is the conditions that, when achieved, accomplish the mission. At the operational level, these conditions attain the aims set for the campaign or major operation."

[25] See U.S. Army, *FM 3-0, Operations*, 5-13 thru 5-18; idem., *FM 6-0, Command and Control (DRAG Edition)*, 4-8 thru 4-11. FM 3-0 states that commanders can use the operational framework and elements of operational design to relate decisive, shaping, and sustaining operations to time and space. An additional framework used in dividing the battlefield is deep, close, and rear.

[26] U.S. Army, *FM 3-0, Operations*, 5-14.

[27] See U.S. Army, *FM 3-0, Operations*, 6-2; idem, *FM 6-0, Command and Control (DRAG Edition)*, 4-6. Commanders identify those information requirements they consider most important to their decisions - CCIR. These are typically information requirements that help them confirm their vision of the battlefield or identify significant deviations from it.

[28] See U.S. Army, *FM 3-0, Operations*, 5-13 thru 5-15; idem., *FM 6-0, Command and Control (DRAG Edition)*, 4-8 thru 4-11. Both of these manuals discuss actions, products, and processes that occur during the Military Decision Making Process or during the planning phase of the operation, not during execution.

[29] See U.S. Army, *FM 3-0, Operations*, 5-15 thru 5-17; idem., *FM 6-0, Command and Control (DRAG Edition)*, 4-12 thru 4-15.

issuance of orders and plans. However, like describing, it must be assumed that in a fluid, rapidly changing battlefield, the commander may direct his subordinates during the execution of an operation, possibly through a verbal fragmentary order, in order to achieve the end state as visualized by the commander.[30]

These three steps ultimately lead to a decision being made and then directing others to act in order to implement that decision. If visualize, describe, direct is viewed as a framework for the implementation of battle command that takes place throughout an operation, and not simply a process that primarily occurs during the planning of an operation, then time is an important factor.

The importance of making decisions faster than the enemy is exemplified by the Observe, Orient, Decide, Act (OODA) cycle.[31] Inherently tied in with time and making a decision quickly, is information. A quick decision is only a good decision if it is based upon relevant and accurate information.[32] In a large and widely dispersed organization like the Army, a communication system that allows commander's to communicate rapidly, even instantaneously, is necessary. Instantaneous communications coupled with relevant and accurate information allows the commander to achieve situational understanding so that he can visualize the current and future states, describe his visualization, and direct his subordinates during the execution of an operation

[30] A fragmentary order is an abbreviated form of an operations order (verbal, written, or digital) usually issued on a day-to-day basis that eliminates the need for restating information contained in a basic operation order. See Headquarters, Department of the Army, *Field Manual 5-0, Army Planning and Orders Production* (Final Draft) (Washington, D.C.: GPO, 15 July 2002), G-7.

[31] See U.S. Army, *FM 6-0, Command and Control (DRAG Edition)*, Appendix A; William S. Lind, *Maneuver Warfare Handbook* (Boulder, Colorado: Westview Press, 1985), 4-6; John R. Boyd's Briefings on Competitive Strategy, *Patterns of Conflict* (December 1986), *Organic Design for Command and Control* (May 1987), *The Essence of Winning and Losing* (January 1996), Available online at http://d-n-i.net/second_level/boyd_military.htm. According to Boyd's theory, conflict is a series of time competitive Observation-Orientation-Decision-Action (OODA) cycles. The adversary that can consistently go through the OODA cycle faster than the other gains a tremendous advantage.

[32] See U.S. Army, *FM 6-0, Command and Control (DRAG Edition)*, 3-15 and 4-6. *FM 6-0*'s cognitive hierarchy lists data, information, knowledge, and understanding as the levels for processing information. The word information is used here as the foundation for a staff system and an experienced commander to turn into understanding.

in a rapidly changing environment.[33] This allows the commander and the entire organization to execute the OODA cycle quicker than the opponent.

This paper will examine how a commander's ability or inability to visualize, describe, and direct has led to the adoption of different types of command at various levels of command throughout history. Based upon this historical analysis, implications for the future will be examined.

[33] For a discussion on how all of these concepts interact, see U.S. Army, Chapter 4, "The Role of the Commander", *FM 6-0, Command and Control (DRAG Edition)*, 4-1 to 4-15.

CHAPTER TWO

HISTORICAL BACKGROUND

Militaries throughout a great deal of the history of warfare have adopted detailed command.[1] This was evident in armies such as the Macedonians under Alexander the Great, the Romans, and the Prussian Army under Frederick the Great.

The reasons that armies naturally adopted this type of command can be found by analyzing their ability to visualize, describe, and direct. In pre-Industrial Age warfare, armies consisted of fewer than 40,000 soldiers and battles were fought on a relatively small scale.[2] Because of this small scale, commanders had the ability to see the entire battlefield and to communicate their intentions and commands rapidly to their subordinates. This allowed commanders the ability to synchronize the commitment of their forces during a battle to a great degree.[3]

The Roman Army provides an example of a military that employed detailed command successfully. Although no single document from that period exists that outlines Roman command, inferences can be drawn based upon available literature.[4]

Because battles were small in nature, a single commander could usually see the entire battlefield.[5] This allowed him to visualize the battle during the actual fight. Prior to that

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[1] U.S. Army, *FM 6-0, Command and Control (DRAG Edition),* 1-12 thru 1-13.

[2] Robert M. Epstein, Lecture by Robert M. Epstein with notes taken by author, 7 January 2003, War and Society in Antiquity, The Rise and Fall of the Greco-Roman World, School of Advanced Military Studies, Fort Leavenworth, Kansas.

[3] The current definition of synchronization in the U.S. Army is: arranging activities in time, space, and purpose to mass maximum relative combat power at a decisive place and time. Through synchronization, commanders arrange battlefield operating systems to mass the effects of combat power at the chosen place and time to overwhelm an enemy or dominate the situation. See U.S. Army,*FM 3-0, Operations*, 4-17. Given the future concepts and capabilities, it is likely that "massing relative combat power" may be replaced with "massing effects." This helps to convey the idea of increased physical dispersion on the future battlefield with the concept of precision engagement.

[4] The Roman military was not a unified and unchanging force throughout the centuries of the existence of the Roman Empire. It did adapt and change over time and its employment differed from one area to another. As such, generalizations must, and will, be made.

[5] The term "battlefield" is used here to define an area where two adversaries massed their forces to fight a battle. When the lethality of firepower increased, forces transitioned to massing their fires, thus dispersing the "battlefield."

however, a Roman commander took great care in selecting the actual battlefield site.[6] He chose the battlefield based upon the terrain and looked for terrain that took advantage of his strengths and his enemy's weaknesses, and protected his weaknesses from his enemy's strengths.[7] In other words, the Roman commander was expected to visualize friendly forces, enemy forces, and terrain in order to decide on a course of action that would achieve his desired end state.

During the battle, the commander continued to be able to visualize the battlefield by positioning himself at a place where he could best see friendly and enemy forces.[8] This allowed them "to gauge how the combat was going and commit or lead in reserve cohorts accordingly."[9]

The Roman commander probably described his vision of the battle prior to or during the drawing up of that army in order of battle.[10] In addition to generally exhorting his troops, he must have at least described his vision of the battle to his second and third in commands.[11] These two sub-commanders were an integral part of the command structure and were given specific tasks to accomplish. The second in command was posted in the center of the infantry to encourage and support them. Under his command, and positioned near him, was a reserve of good and well-armed infantry.[12] The third in command was posted on the left of the battle line.[13] He had a

[6] Flavius Vegetius Renatus, *The Military Institutions of the Romans (De Re Militari)* Translated by Lieutenant John Clarke. (Harrisburg, Pennsylvania: Stackpole Books, March 1985), 153.

[7] Ibid., 153, 172. Two of Vegetius' maxims were "Good generals are acutely aware that victory depends much on the nature of the field of battle" and "A general is not easily overcome who can form a true judgment of his own and the enemy's forces."

[8] Adrian Goldsworthy, *Roman Warfare* (London: Cassell & Co, 2000), 125-126.

[9] Ibid.

[10] Michael Grant, *The Army of the Caesars* (New York: Charles Scribner's Sons, 1974), 16-17. As Micahel Grant states: "The need for a Roman general, if he wanted to be successful, to *communicate* with his soldiers by word of mouth is abundantly illustrated by the practice of Caesar."

[11] Vegetius, *The Military Institutions of the Romans*, 152, 157. In instilling his vision of victory in his troops, Vegetius writes: "A general, however, may encourage and animate his troops by proper exhortations and harangues, especially if by his account of the approaching action he can persuade them into the belief of an easy victory. He should lay before them the cowardice or unskillfulness of their enemies and remind them of any former advantages they may have gained over them."

[12] Ibid., 157. With this reserve, the second in command either formed the wedge to pierce the enemy's line or, if the enemy formed the wedge first, prepared the pincers for its reception.

[13] Ibid.

reserve of good cavalry and active infantry that enabled him to extend the left of the line in order to prevent from being outflanked and surrounded.[14]

The Roman commander positioned himself where he could survey the battlefield and communicate with the entire army.[15] During the battle, the Roman commander was able to visualize the changing events of the battlefield, describe his new vision of what actions his army must take to achieve his desired end state. The final step was directing his army to achieve that vision. In doing this, he was able to direct his units effectively because of standardized formations and because of an effective communication system.

The Roman army was above all, a well disciplined and trained army. The greater discipline of the Roman army was reflected in its battle tactics. The Roman army practiced and implemented at least seven different formations for the deployment into battle.[16] During battle, the Roman army used at least five different maneuvers that were executed depending upon the situation.[17] Because these were standardized and were rehearsed constantly in training, the commander could direct elements of the army to deploy in a specific battle formation and execute a specific maneuver, confident that his vision and orders would be met.

Superior discipline and training and standardized formations and maneuvers alone did not allow the Roman commander to rapidly direct subordinates. A necessary ingredient for the

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[14] Ibid.

[15] Ibid. As Vegetius wrote about the position of the commander: "The post of the commander-in-chief is generally on the right between the cavalry and infantry. For from this place he can best direct the motions of the whole army and move elements with the greatest ease wherever he finds it necessary. It is also the most convenient spot to give his orders to both horse and foot and to animate them equally by his presence."

[16] Ibid., 160-164. They were the oblong square, oblique, a slight variation of the oblique, an envelopment, an envelopment covered with light infantry and archers in the center, a right flank turning attack, line formation with at least one flank covered by a natural obstacle.

[17] See Martin van Creveld, *Command in War* (Cambridge, Massachusetts: Harvard University Press, 1985), 46-47; Vegetius, *The Military Institutions of the Romans*, 157; Grant, *The Army of the Caesars*, xxx-xxxi. They were: (1) wheeling back the wings and forming a circular position to meet the enemy (used to meet an enemy attempt to encircle or outflank), (2) forming a wedge to pierce the enemy's line (also called a swine or boars head), (3) forming a pincer, resembling the letter V, to meet an enemy's wedge, (4) forming the saw; a straight line of resolute soldiers advanced into the front against the enemy to repair any disorder and (5) forming a platoon to hover on every side of the enemy and attack them

commander to successfully describe his vision and direct his units during battle was a communication system.

From at least Caesar's day, Roman infantry advanced slowly and in silence.[18] Only when they were within 15 meters of the enemy did they throw their *pilum*, break their silence, and charge the enemy.[19] There are numerous reasons for this silent advance. One of the primary ones was that a silent advance was more intimidating. An additional reason was that a slower, steadier advance kept the ranks in order, allowing the officers to keep control over the formation and ensuring that the unit remained a dense mass throughout the charge.[20] This allowed the commander the ability to direct his sub-units based upon the enemy's dispositions prior to committing them in the final charge, where control was diminished once a unit was in contact.[21]

The foundation of the Roman commander's ability to communicate rapidly lay with the implementation of military standards, or battle flags and guidons. Although these came to be ultimately regarded with quasi-religious veneration, there is evidence that they were used for a much more practical reason. The very name of the standards in Latin, *signa*, suggests that they were in fact signals.[22] The use of standards as signals allowed commanders to direct units to execute different maneuvers and adopt different formations quickly. The standards also served as a rallying point for the soldiers of each unit.[23] In addition to standards, bugles were also present

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wherever an opportunity presented itself, or to guard against the enemy from doing the same to the Roman army.

[18] Goldsworthy, *Roman Warfare*, 125.

[19] Ibid., 44, 125. A *Pilum* was a heavy javelin and was the classic weapon of the Roman legions for over five centuries.

[20] Ibid., 125.

[21] Ibid., 54. Roman armies generally formed in three lines (the *hastate*, *principes* and *triarii*). As Goldsworthy notes: "The skill of a Roman commander lay in committing his second and third lines at the right time."

[22] See John Warry, *Warfare in the Classical World: War and the Ancient Civilizations of Greece and Rome* (London: Salamander Books, 1998), 180; van Creveld, *Command in War*, 45.

[23] Warry, *Warfare in the Classical World*, 180. Warry states that "A study of ancient references to the position of the standards on the battlefield suggests that they may have been located immediately behind the front line. They were thus protected, and yet at the same time sufficiently far advanced to serve as marking signals."

in all permanent subunits and were also used to signal orders, presumably to the soldiers of each unit.[24]

Because the Roman army used several standard formations, drilled on them constantly, and implemented a communication system to direct units and rally soldiers to points of the battlefield quickly, the Roman commander was able to visualize the battlefield, describe his vision to his subordinates, and direct those subordinates to achieve his end state.[25] At the foundation of his ability to do this successfully over his opponent, in order to gain an advantage, is time.[26] Because the commander could personally see the battlefield, his visualization was instantaneous. Because of his position, his visualization of the battlefield was probably better and more complete than was his subordinate commanders. He alone, then, had the best knowledge of what the status of his forces were, what the enemy's action and dispositions were, and how his army could best achieve the end state of defeating the enemy army.[27] Standardized formations and maneuvers, along with a communication system, allowed him to quickly direct his subordinates to achieve his desired end state.

The ability of the Roman commander to visualize the battlefield more completely than his subordinates, describe that visualization quickly and coherently, and then direct those subordinates almost instantaneously meant that they successfully adopted and implemented detailed command. As stated previously, however, there are no absolutes in command types and the Roman army was far from a collection of automaton-like sub-units waiting for direction from the commander. There is evidence that the incorporation in mission-type command in lower units

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[24] van Creveld, *Command in War*, 45. Permanent subunits such as the century, maniple, or cohort, according to the period.

[25] Josephus, (*Jewish War*) in *The Army of the Caesars*, Grant, xxviii. Josephus wrote: "This perfect discipline makes the army an ornament of peace-time and in war welds the whole into a single body - so compact are their ranks, so alert their movements in wheeling to right or left, so quick their ears for orders, their eyes for signals, their hands to act upon them."

[26] Getting inside the opponent's OODA cycle.

[27] Gaius Julius Casar (*Gallic War*) in *The Army of the Caesars*, Grant, 17. When Caesar was defeated by Vercingetorix because his troops had not listened to orders, he wrote: "I called a meeting of the soldiers and reprimanded them for the over-eagerness and lack of restraint which they had shown in having

was sought and was a key ingredient in what made the Roman army so successful. As van Creveld notes:

> Time and again (Zama, Cynoscephalae, Thermopylae, Magnesia, and Ceasar's battle against the Belgians are good examples) the sources mention centurions, or else military tribunes, field-grade officers all, who "knew what to do" and "judging on the spur of the moment" came to their comrades aid, or closed a legion's shattered ranks, or took a number of maniples and, apparently acting on their own initiative, carried out an outflanking movement.[28]

Standard Roman battle formation consisted of three lines of troops. In battle, the three lines were deployed in a checkerboard formation, with the units of the second line covering the gaps between the units of the first line and the units of the third line covering the gaps between the units of the second line.[29] Although there is not a universally held belief on the reason for the checkerboard formation, some argue that this formation was to enable subordinate leaders to take advantage of local situations.[30] By leaving open room to maneuver and allowing the sub-unit leaders to see each other's units, the formation enabled them to come to each other's aid and to exploit a local and temporary opportunity, possibly a break in the enemy's line.[31] This tactical flexibility allowed junior leaders to react to local opportunities or threats.[32]

Even though the Roman army was able to achieve tactical flexibility through subordinate initiative, it was still the overall army commander who was effectively able to synchronize and coordinate the efforts of all the units in order to defeat the enemy. The sub-unit commander was only worried about his local fight to his immediate front or flank, while the army commander was concerned with achieving the overall end state of defeating the enemy army. Figure 2 portrays

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ventured to decide for themselves where they ought to go and what they ought to do, in failing to halt when the signal for retreat was given, and in disobeying the orders of their generals and their officers."

[28] van Creveld, *Command in War*, 46.

[29] Goldsworthy, *Roman Warfare*, 44-45, 51-52. The checkerboard formation was called the *quincunx*.

[30] van Creveld, *Command in War*, 45-46.

[31] See Goldsworthy, *Roman Warfare*, 44-45, 51-52; van Creveld, *Command in War*, 45-46. Goldsworthy states that the traditional belief is that the checkerboard formation was used only during the advance and a solid line was formed just prior to reaching the enemy. This presumably was to assist in controlling the troops' movement over broken ground. He also provides his own theory that gaps were maintained throughout a battle in order to "feed" fresh units into the battle without having to withdraw units already engaged.

the Roman command system in relation to how well each level of command was able to visualize, describe, and direct in terms of time and information.[33]

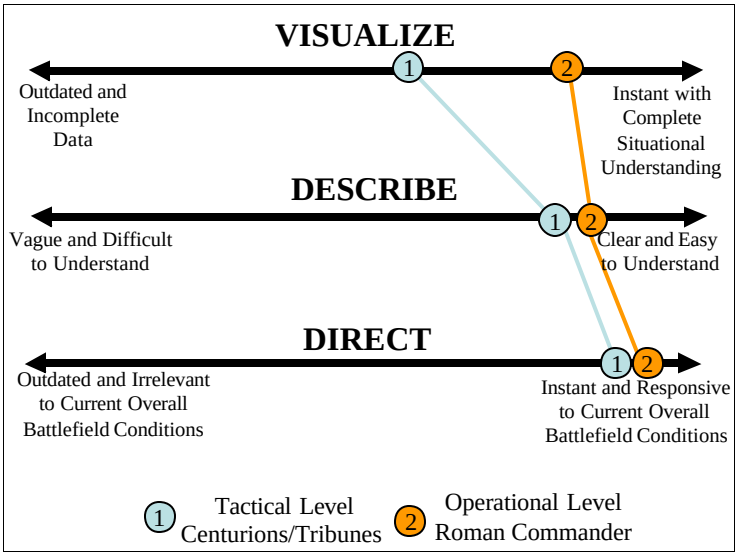

Fig. 2. Roman Army Battle Command

Because the Roman army commander had a better ability to visualize the complete battlefield and direct subordinate units quickly in order to react to rapidly changing events, his use of detailed command gained ascendancy over his subordinates use of mission command. The Romans fought many battles and engagements against an army of barbarians. The barbarians were united by a common vision of defeating the Roman army and essentially employed mission command because of the loose confederation of tribes normally assembled against the Roman

[32] van Creveld, *Command in War*, 46.

[33] This figure, as well as figure 3, incorporates the functions of battle command (visualize, describe, and direct) and illustrates a commander's ability, at both the tactical and operational level, to accomplish those functions in a timely manner. Time is a necessary component in assessing the effectiveness of each type of command. The ability to communicate allows the transmission of information, and orders, so that they are timely, accurate, clearly understood and relevant. Conversely, the inability to communicate means that information and orders will be either outdated, inaccurate, difficult to understand, or irrelevant (or all of these things). Timeliness of actions and situational understanding of the commander will be discussed further in Chapter 4 of this monograph.

army.[34] These barbarian armies venerated individual bravery and initiative in battle. Because these barbarian armies did not have permanent formations and a communication system to rapidly relay orders, it was difficult for their commanders to maneuver them during battle.[35] Against a Roman commander, who did possess these things, the Roman commander, using detailed command, usually won.[36]

With the advent of the Industrial Age, armies were increasingly more dispersed across the breadth and depth of battlefields. This dispersion did not allow effective detailed command because of the dynamic, complex, and rapidly changing environment that encompassed vast distances. A primary reason that this type of command was ineffective was that communications systems were unable to relay information in a timely manner. To re-impose some form of command and control, it was important to develop a new concept that enabled some independence of action on one hand while, on the other, precluded misguided action by lower-level commanders.[37]

During the latter parts of World War I and most of World War II, the German Army adopted mission command (*Auftragstaktik*) and was able to achieve notable results.[38] This type of command unleashed subordinate's initiative by clearly outlining the commander's intent for the mission and by using mission-type orders. This type of command allowed subordinates to

[34] See Goldsworthy, *Roman Warfare*, 85-90 for a discussion on the Celtic tribes of Northern Italy from 225 BC to 171 BC.

[35] Ibid., 85.

[36] For a good discussion on this see Goldsworthy, *Roman Warfare*, 85, 88.

[37] Major General Werner Widder, "Auftragstaktik and Innere Fuhrung: Trademarks of German Leadership," *Military Review*, September-October, 2002, 4.

[38] The current German definition is described in Army Regulation 100/100: "Auftragstaktik is the pre-eminent command and control principle in the Army. It is based on mutual trust and requires each soldier's unwavering commitment to perform his duty. . . . The military leader informs what his intention is, sets clear achievable objectives, and provides the required forces and resources. He will only order details regarding execution if measures which serve the same objective have to be harmonized, if political or military constraints require it." Quoted in Widder, "Auftragstaktik and Innere Fuhrung," *Military Review*, 4.

continue toward a common objective without communicating with their higher commander to continually receive updated guidance.[39]

This was very effective in coordinating efforts across a widely dispersed modern battlefield because the higher commander could no longer visualize the battlefield very well, if at all, during the execution of the operation (see figure 3). He was able to visualize the battlefield during the planning of the operation and was therefore able to describe his visualization to his subordinates in the form of his commander's intent and then directed them to accomplish his visualization by giving mission orders. These orders told the subordinate what the higher commander wanted to have accomplished.[40] How that got accomplished was largely left to the subordinate based upon the situation he encountered during execution.[41]

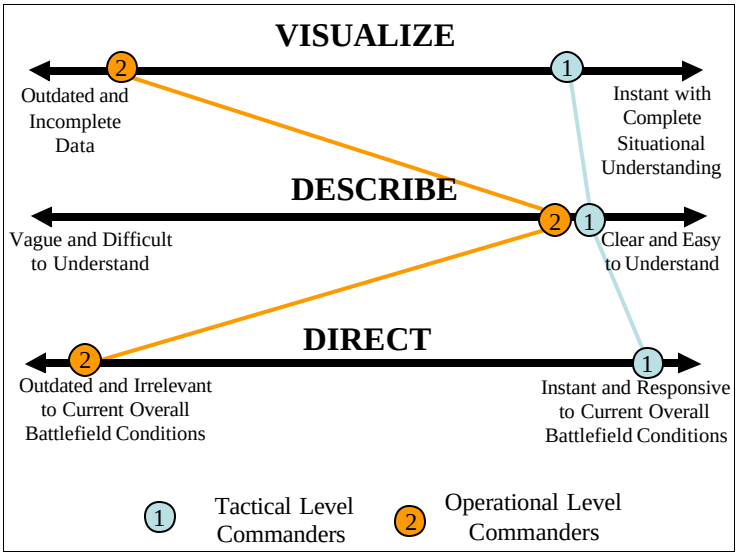

Fig. 3. Auftragestaktik Battle Command

[39] See John T. Nelsen II, "Auftragstaktik: A Case for Decentralized Battle," *Parameters*, September, 1987, 21-34, for a good discussion of mission command.

[40] Lind, *Maneuver Warfare Handbook*, 13.

[41] Ibid.

The key point in the adoption of mission command in the modern era is that the only way to achieve timely decisions that were based upon relevant and accurate information was to "push" decision making down.[42] Lower level commanders were best able to visualize the battlefield and direct their unit to accomplish tasks necessary to meet the higher commander's intent. In this way, armies that adopted mission command were able to make quicker decisions than their opponents based upon the unit level that had the most accurate information on what was happening on the rapidly changing battlefield.[43]

Gradual improvements in communication systems increased the higher commander's ability to visualize the battlefield during the execution of the battle as well as his ability to direct his subordinates in a timely manner. No improvements in communications systems have been able to surpass a lower unit commander's ability to visualize the battlefield and then act, in accordance with his higher commander's intent, quicker than an opponent that adheres to detailed command. By the time that the situation has been relayed back to a higher commander, the subordinate unit commander that acts instantly will quickly make the report being relayed to the higher commander invalid, outdated, and probably irrelevant.

Not all modern armies adopted this form of command however. A notable and lamentable example of an army continuing to use detailed command against an army using mission command is the French Army during the German invasion in 1940. The French adopted a doctrine of "Methodical Battle" between the World Wars.[44] This term implies a rigidly

[42] Ibid., 6. As theorist William Lind states: "Only a decentralized military can have a fast OODA Loop. If the observations must be passed up a chain of command, the orientation made and the decision taken at a high level, and the command for action then transmitted back down the chain, the OODA Loop is going to be slow."

[43] The classic example of this is the German Army's invasion of France in 1940. For more information on this see Robert Allan Doughty, *The Breaking Point: Sedan and the Fall of France, 1940* (Hamden, Connecticut: Archon Books, 1990); Florian K. Rothbrust, *Guderian's XIXth Panzer Corps and The Battle of France: Breakthrough in the Ardennes, May 1940* (New York: Praeger Publishers, 1990).

[44] Robert Allan Doughty, *The Seeds of Disaster: The Development of French Army Doctrine, 1919-1939*, (Hamden, Connecticut: Archon Books, 1985), 3-4. In French the term is *bataille conduite.*

controlled operation in which all units and weapons were carefully marshaled and then employed in combat.[45]

The French developed and adopted this doctrine because they believed that artillery dominated the modern battlefield.[46] In an attempt to best support the artillery, they centralized command in order to synchronize the infantry and armor with the artillery. In the offense or the defense, the French favored a step-by-step battle, with units obediently moving between phase lines and adhering to strictly scheduled timetables.[47] The focus of decision making was kept at higher command levels, because they believed that a detailed command system was necessary to coordinate the actions of numerous subordinate units.

The doctrinal development of the French stressed the synchronization of units toward a common objective. Where this doctrine failed was in its failure to take timeliness of decisions and information into account on the modern, dispersed battlefield. Because the commander had not lost the ability to visualize, describe, and direct his subordinates prior to the execution of an operation, synchronization would be achieved in methodical battle by time-consuming preparation and thorough pre-planning.

The weakness of the French system in relation to an army exercising mission command was highlighted during the 1940 Battle of France. Because the French doctrine and the system supporting that doctrine emphasized pre-planning and detailed command, the army and its leaders lacked the flexibility and responsiveness to reply to the unexpected in a timely manner. Communications with subordinate units were tenuous and usually required a great deal of time to relay messages. Information, if it was received at all, was outdated and incomplete. New orders, based upon information received, were outdated, incoherent, and no longer applicable to the current situation that subordinates found themselves in. Thus, French commanders lost the ability

[45] Ibid., 4.
[46] Ibid., 154-155.
[47] Ibid., 4.

to visualize the changing battlefield in a coherent manner. They also lost the ability to describe and direct their units in a way that effectively dealt with the German's OODA cycle.[48]

In the end, the Battle of France was won by the side that could make the best decisions fastest. The Germans utilized mission command, which allowed subordinates to act based upon the situation that was encountered, but within their commander's intent.[49] Subordinates were best able to visualize, describe, and direct units so that a common objective was met. They were able to make the best decisions because they were the ones with the best information. They were also able to make the fastest decisions because they were the ones making decisions and did not have to relay information to a higher headquarters and wait for their orders.

The French Army during the Battle of France is often used, either deliberately or subconsciously, as the paragon of detailed command and its inherent weaknesses versus an army utilizing mission command. Several points must be made in order to properly judge detailed command for any future force. The first is that French doctrine emphasized pre-planning and did not foresee any problem with using detailed command during the execution of an operation because they did not expect anything unexpected.[50] Therefore, they did not envision using detailed command to react to a rapidly changing battlefield. The second point is that, had they envisioned using detailed command to react to a rapidly changing battlefield, and taken the importance of making timely decisions into account, they may have realized that the current state

[48] The best example of this is Plan Yellow and the successful German breakthrough at Sedan by Guderian's Panzer Corps.

[49] An argument could be made, however, that the Germans used detailed command, when they were able to communicate, at the operational level. Plans developed essentially according to plan, requiring little or no initiative at the operational level. Also, there is ample anecdotal information available on restrictions imposed upon the leading German elements by higher echelons of command that inhibited the lower unit commander's freedom to maneuver and initiative. See Doughty, *The Breaking Point*, 202, 221-224, 236-238, 326-332; Rothbrust, *Guderian's XIXth Panzer Corps*, 83-88.

[50] See Doughty, *The Seeds of Disaster*, 4; idem, *The Breaking Point*, 294-320. Doughty writes: "In contrast to a decentralized battle in which officers at all levels were expected to show initiative and flexibility, the French preferred rigid centralization and strict obedience. Their doctrine stressed the necessity of avoiding an encounter battle in which moving armies unexpectedly collided and had to fight in an impromptu and spontaneous fashion. They thus opted for a time-consuming, intricate process that prized preparation rather than improvisation."

of technology did not allow them to communicate rapidly.[51] The inability to communicate in a timely manner, relaying information up and orders down, doomed the French detailed command system versus the German mission command system.

The militaries of the last 200 years incorporated many technological improvements which have improved the situational understanding of the commander, enabling him to better visualize the battlefield.[52] These advances, however, have not allowed the commander the ability to visualize the battlefield better and faster than subordinates could. The best solution for armies seeking synchronization on the modern battlefield has proven to be mission command.[53]

The U.S. Navy's Anti-Submarine Warfare (ASW) efforts during World War II provide an example of effective use of detailed command of a variety of forces across a widely dispersed area. Several technological innovations, such as radar, radio communications, and naval aviation, allowed the Navy to visualize their "battlefield" in a more thorough and all-encompassing way than individual ships, planes, and other subordinate units could.[54] Because of this, the U.S. Navy was able to synchronize the efforts of all subordinates better using detailed command.

Whereas land forces have changed from effectively using detailed command to being aware that mission command was more effective on the modern day battlefield, Naval forces had traditionally used mission command and in this instance changed to detailed command at the operational level.[55] The headquarters coordinating ASW was able to receive inputs from many

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[51] This assertion is really the foundation of the development and adoption of mission command. The Germans expected to lose contact with their higher headquarters. They trained accordingly, using mission command to overcome the inability to communicate and transmit information and receive updated guidance on a continual basis. See Doughty, *The Breaking Point*, 326-332; Rothbrust, *Guderian's XIXth Panzer Corps*, 89-95.

[52] Major technological improvements include the telegraph, the telephone, wireless and portable radio communications, to name just a few.

[53] Two examples are the German army during World War II and the Israeli Defense Forces during their numerous wars against Arab militaries. Although exceptions can be identified in each army, they both emphasized and used mission command successfully.

[54] Eliot A. Cohen and John Gooch, *Military Misfortunes: The Anatomy of Failure in War*, (New York: The Free Press, 1990), 84-94.

[55] Ibid., 85. Generally, armies as recently as several hundred years ago used detailed command effectively against their adversaries. It could be argued that prior to the French Revolution and the rise of Napoleon, the (land) commander who best used detailed command gained an advantage over his opponent.

sources, analyze those sources, and then develop a better understanding of the situation than subordinates. Additionally, they were able to communicate quickly and clearly to subordinate units in order to synchronize their movements and actions.[56]

In order to capitalize upon the strengths inherent in mission command, subordinate units used their own initiative and did what was necessary to accomplish their missions in accordance with the situation that they encountered. For instance, a destroyer would be ordered to a certain area to conduct a patrol. Once it sighted a submarine, it would be up to the destroyer's captain to use his own initiative to do what was necessary to destroy that submarine.[57]

The effective use of detailed and mission command throughout history is based upon the commander's ability to visualize the battlefield in its current and desired end state, describe that visualization, and then direct his subordinates prior to and during the execution of an operation or battle. Where the commander has had the ability to visualize, describe, and direct faster and more clearly than his subordinates, detailed command has been the most effective type of command to synchronize those subordinates. On a dispersed battlefield, where subordinates have a clearer understanding of the current situation, history shows that those subordinates can make the decisions faster than an opponent who attempts to relay information to a higher headquarters and then awaits guidance from that headquarters before acting.

Rather than either type of command being ubiquitous at all levels of war at any given period in history, the most successful militaries have adopted the type of command that allowed each level of command the ability to make decisions faster than its adversary. At the operational level of war, this has fluctuated between detailed command and mission command depending upon circumstances and technology. As this chapter has shown, at the tactical level of war, the

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[56] Ibid., 91. The Tenth Fleet fused operational intelligence, the control of convoys, the allocation and direction of all antisubmarine units under one commander.

[57] Ibid., 76, 91. The key task of developing doctrine for accomplishing the destruction of the submarine was, however, centralized. This helped to capture a wide variety of lessons learned so that new measures for countering different tactics employed by the German U-Boats were developed and disseminated throughout the force.

most successful militaries have employed some degree of mission command. This has allowed subordinate units the ability to exercise initiative to meet sudden challenges and unexpected opportunities to achieve success on the battlefield. Militaries must continually reevaluate their ability to achieve situational understanding at all levels so that commanders can visualize the battlefield, then describe the end state to subordinates and direct them to achieve that end state. Blind adherence to a single type of command, whether itbe Roman-era Barbarian armies, the French in 1940, or the U.S. Navy during the early part of World War II, invites disaster.

CHAPTER THREE

CURRENT DOCTRINE AND FUTURE CONCEPTS

The United States military has attempted to describe the future environment of conflict in Joint Vision publications. Both *Joint Vision 2010* and *Joint Vision 2020* outline the future operational concepts of the U.S. military.[1] These visions describe a military that will transform to be faster, more lethal, and more precise than they are today.[2] Using the concepts of innovation and information superiority as a foundation to realize the full potential of the information revolution, the future force will be capable of dominant maneuver, precision engagement, focused logistics, and full dimensional protection.[3]

The primary joint capability of the future that the army will contribute to in a major theater war is dominant maneuver.

> Dominant maneuver is the ability of joint forces to gain positional advantage with decisive speed and overwhelming operational tempo in the achievement of assigned military tasks. Widely dispersed joint air, land, sea, amphibious, special operations and space forces, capable of scaling and massing force or forces and the effects of fires as required for either combat or noncombat operations, will secure advantage across the range of military operations through the application of information, deception, engagement, mobility and counter-mobility operations.[4]

Dominant maneuver will be enabled by adaptive and concurrent planning, coordination of widely dispersed units, gathering of timely feedback on the status, location, and activities of subordinate units, and anticipation of the course of events leading to mission accomplishment.[5] The enablers for dominant maneuver closely correlate with being able to visualize the entire battlefield throughout an operation and coordinating subordinate units to accomplish the desiredendstate.

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[1] U.S. Joint Chiefs of Staff, *Joint Vision 2020,* (Washington, D.C.: GPO, June 2000), 1-2. This document states that "The strategic concepts of decisive force, power projection, overseas presence, and strategic agility will continue to govern our efforts to fulfill those responsibilities and meet the challenges of the future."

[2] Ibid., 1.

[3] Ibid., 1-2. These capabilities are different from today's capabilities of: maneuver, strike, logistics, and protection.

[4] Ibid., 20.

[5] Ibid.

Implicitly tied with dominant maneuver during the conduct of a major theater war is precision engagement.

> Precision engagement is the ability of joint forces to locate, surveil, discern, and track objectives or targets; select, organize, and use the correct systems; generate desired effects; assess results; and reengage with decisive speed and overwhelming operational tempo as required, throughout the full range of military operations.[6]

The pivotal characteristic of precision engagement is the linking of sensors, delivery systems, and effects.[7]

One of the primary foundations of future thinking, whether in the joint or army realm, involves information superiority or information dominance. *Joint Vision 2020* defines information superiority as the capability to collect, process, and disseminate an uninterrupted flow of information while exploiting or denying an adversary's ability to do the same.[8] It goes on to say that "the word 'superiority' implies a state or condition of imbalance in one's favor" and that it "is transitory in nature and must be created and sustained by the joint force through the conduct of information operations."[9]

Joint Vision 2020 points out the primary reason for striving to obtain information superiority is to gain a competitive advantage. The joint force creates an advantage only when it is able to translate the information superiority into superior knowledge and decisions.[10]

> The joint force must be able to take advantage of superior information converted to superior knowledge to achieve "decision superiority" – better decisions arrived at and implemented faster than an opponent can react, or in a noncombat situation, at a tempo that allows the force to shape the situation or react to changes and accomplish its mission.[11]

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[6] Ibid., 22.

[7] Ibid., 22. Although Joint Vision 2020 fails to explicitly define "effects," it is clear from the remainder of the discussion in that publication that it is closely linked to the joint concept of Effects Based Operations (EBO). EBO is a process for obtaining a desired strategic outcome or "effect" on the enemy, through the synergistic, multiplicative, and cumulative application of the full range of military and nonmilitary capabilities at the tactical, operational, and strategic levels. See United States Joint Forces Command (USJFCOM) Glossary, Available online at http://www.jfcom.mil/about/glossary.htm.

[8] Ibid, 8.

[9] Ibid.

[10] Ibid. Although unstated in this document, it is implied that better knowledge will lead to better situational understanding as the precursor to making better decisions.

[11] Ibid.

This definition and discussion closely approximates visualizing the current and future states, then describing that vision and directing subordinates in a way that beats the opponents OODA cycle. In other words, a commander who makes decisions that are based upon better situational awareness, faster than an adversary, will obtain "decision superiority." Although this is a new term, as has been shown, it is based upon a timeless concept that has been true throughout history.

The Army has also described what it envisions as the future operating environment in *Army Vision 2010* in which it establishes the Army's role in future joint operations. The fundamental competency the Army contributes to joint operations is the ability to conduct prompt and sustained operations on land throughout the entire spectrum of crisis.[12] The Army of the future will execute six patterns of operations. The patterns are: project the force, protect the force, shape the battlespace, decisive operations, sustain the force, and gain information dominance.[13] These patterns align with the joint operational concepts with the exception of gaining information dominance.[14]

The difference between information dominance and information superiority isill-defined. *Army Vision 2010*states that gaining information dominance is fundamental to each of the other five army patterns of operations as well as each of the operational concepts in*Joint Vision 2020.*[15] Current army doctrine defines information superiority as the operational advantage derived from the ability to collect, process, and disseminate an uninterrupted flow of information while exploiting or denying an adversary's ability to do the same.[16] It goes on to state that information superiority describes the degree of dominance a commander has over the part of the information environment that affects his operations and over the enemy in terms of information-based

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[12] Headquarters, Department of the Army, *Army Vision 2010* (Washington, D.C.: GPO, n.d.), 1.

[13] Ibid., 10.

[14] See U.S. Army, *Army Vision 2010*, 10; idem, *Field Manual 3-13, Information Operations: Doctrine; Tactics, Techniques and Procedures (DRAG Draft Edition)* (Washington, D.C.: GPO, 9 November 2001), 1-9. *FM 3-13* states that "while joint doctrine considers information superiority to be a capability, Army doctrine establishes it as an operational advantage."

[15] U.S. Army, *Army Vision 2010*, 10. *Joint Vision 2020* sees information superiority as fundamental to achieving its operational capabilities, but does not make it a separate capability.

activities.[17] The *Concepts for the Objective Force* states that information operations consist of both offensive and defensive efforts to create a disparity between what we know about our battlespace and operations within it and what the enemy knows about hisbattlespace.[18] This definition is concise in that, in essence, it means that we have a better understanding of the actual, current situation on the battlefield than our adversary does.

The army conducts decisive operations to force the enemy to decide to give in to our will.[19] Decisive operations are inextricably linked to shaping the battlespace and precision engagement because it is enhanced by the precision fires, precise information, and precise detection capabilities inherent to precision engagement.[20]

Specifically in terms of the Objective Force, the Army envisions a force that is smaller, more agile, and more lethal than the present force.[21] The Army's fulfillment of decisive operations will support the joint force in achieving the full potential of precision engagement and dominant maneuver.[22] To do this, the Objective Force will need to develop situations out of contact, maneuver to positions of advantage, engage enemy forces beyond the range of the enemy's weapons; destroy them with precision fires and maneuver; and tactically assault the enemy's capabilities or locations at times and places of our choosing.[23] All of these involve having the ability to mass effects and forces rapidly from widely dispersed locations.

The characteristics envisioned for the Objective Force are that it is: responsive, deployable, agile, versatile, lethal, survivable, and sustainable.[24] Of these, agility, versatility, lethality, and survivability are arguably the most important in determining the most effective type of command in a major theater conflict.

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[16] See U.S. Army, *Field Manual 3-13, Information Operations (DRAG Draft Edition)*, 1-9; idem, *FM 3-0,Operations*, 11-2.
[17] Ibid.
[18] U.S. Army, *Concepts for the Objective Force*, 17.
[19] U.S. Army, *Army Vision 2010*, 12.
[20] Ibid.
[21] U.S. Army, *Concepts for the Objective Force*, iv.
[22] U.S. Army, *Army Vision 2010*, 10.
[23] U.S. Army, *Concepts for the Objective Force*, v.

In terms of agility, the *Concepts for the Objective Force* states that information technologies will enable agility.[25]

> Information superiority via a web-enhanced, knowledge-based common operating picture is key to this effort. This demands C4ISR [Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance] systems that are vertically and horizontally layered and integrated from the strategic to the tactical level across all systems. Drawing information tailored intelligence products, updated in near-real time, from a wide variety of automated and human sources provides a knowledge backbone that revolutionizes and expedites the decision-action cycle.[26]

This document goes on to stress the importance of information superiority by explaining that the Objective Force "will use a system-of-system approach (layered, multiple paths), coupled with flexible operating procedures, to provide the level of redundancy necessary for information assurance."[27]

Much of the discussion concerning versatility of the Objective Force concerns operating across the spectrum of conflict while achieving tactical mobility.[28] A key concept is established during the discussion however. *Concepts for the Objective Force* explains that Objective Force units will use collaborative, distributed decision aids. These aids will enable leaders to maintain uninterrupted situational understanding and enables their effective leadership during dynamically changing conditions anywhere on the battlefield whether stationary or on the move, mounted or dismounted.[29]

Through technological improvements in weaponry and munitions, the Objective Force will have the capability to destroy enemy formations at longer ranges, with smaller calibers, greater precision and more devastating target effects.[30] Closely tied to precision engagement, embedded intelligence will enable selective engagement of those targets whose destruction

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[24] Ibid., 9-15.
[25] Ibid., 10
[26] Ibid.
[27] Ibid., 11.
[28] See U.S. Army, *Concepts for the Objective Force*, 11-12, 14-15; *Field Manual 3-0, Operations*, 1-15. Full spectrum operations include offensive, defensive, stability, and support operations.
[29] U.S. Army, *Concepts for the Objective Force*, 12.
[30] Ibid., 12-13.

creates the greatest effects on the enemy force.[31] The concept of lethality in the Objective Force is not simply about having more killing power or about being able to target more precisely. Superior situational understanding, based on advanced C4ISR capabilities embedded at all levels, enables ground commanders to operate non-linearly, bypassing what is less important or non-decisive, to focus operations against forces and capabilities most critical to the enemy's defense.[32]

The final characteristic most applicable to the Objective Force in a major theater war is survivability. Agility combined with the Common Operational Picture (COP) will allow Objective Force units to maximize survivability by seeing and understanding potential dangers in order to move away from the danger or maneuver to position forces to counter that potential danger. Objective Force survivability will be linked to its inherently offensive orientation, as well as its speed and lethality. By seizing the initiative and seeing, understanding, and acting first, the Objective Force will enhance its own survivability through action and its retention of the initiative.[33]

Obviously, a prominent theme in future army theory is using technology to develop a better situational understanding of the battlefield. Modern technologies will exploit situational understanding phenomena to enable tailored, still undefined combat organizations to task organize quickly and fight dispersed with extraordinary ferocity and synchronization.[34] How those forces are synchronized and who maneuvers them to positions of advantage are questions inherent in determining which type of command is best for the Objective Force.

Based upon the concepts outlined, commanders in the Objective Force will need to know how to make decisions rapidly. The Army envisions this necessitating a change from plan-centric to intent-centric operations and from static command posts to situational awareness on the

[31] Ibid., 13.
[32] Ibid.
[33] Ibid., 14.
[34] U.S. Army, *Army Vision 2010*, 12.

move.[35] At the operational and tactical levels, the Objective Force's goal is to be able to see first, understand first, act first and finish decisively.[36] The key enablers for seeing first and understanding first include a "knowledge-based Battle Command system; mentally agile, intuitive, self-aware and adaptive leaders at all levels; and an execution-centric Command and Control (C2) system that goes beyond command and control on the move, giving the commander Tactical Operations Center-like capabilities anywhere on the battlefield."[37]

The concept of see first, understand first, act first, and finish decisively, effectively incorporates the current idea of visualize, describe, direct with the necessity of making decisions based upon situational understanding in a timely manner inherent in observe, orient, decide, and act. The *Concepts for the Objective Force* sees this as the means to tactical success that will be characterized by maneuvering dispersed tactical formations of Future Combat Systems units linked by web-centric C4ISR capabilities for common situational dominance.[38]

Objective Force units will see first by detecting, identifying, and tracking the individual components of enemy units.[39] This will be accomplished using advanced technologies that will fuse inputs into one common picture of the battlefield: the COP.[40]

The COP produced by seeing first provides an unprecedented opportunity to understand what the enemy is doing and better anticipate its intentions.[41] The *Concept for the Objective Force* states that leaders must be educated for rapid synthesis of information, intuitive assessments of situations, and rapid conceptualization of friendly courses of action.[42] Additionally leaders must be able to effectively communicate their intent.[43]

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[35] U.S. Army, *Concepts for the Objective Force,* v. Plan-centric and intent-centric operations are not defined in this publication. They are probably allusions to a reliance upon pre-planned operations and operations that are more fluid in nature, but are guided by the commander's intent.

[36] Ibid., 6-8.

[37] Ibid., 7.

[38] Ibid., 6.

[39] Ibid., 7.

[40] Ibid.

[41] Ibid.

[42] Ibid.

[43] Ibid.

In terms of acting first, the army most clearly outlines what type of command is envisioned for the Objective Force and how mission command will be used within the future concepts, using the capabilities envisioned.

> Seeing and understanding first gives commanders and their formations the situational dominance necessary to act first - - to engage at times and places with methods of their own choosing. Instantaneous dissemination of commander's intent coupled with broad access to the COP on a non-contiguous battlefield will provide unprecedented opportunities for decentralized decisionmaking. Using initiative within the commander's intent, subordinates will be able to exploit enemy vulnerabilities and reduce their risk as opportunities present themselves.[44]

This clearly outlines the proposition that on the future battlefield, where everyone has the same visualization of the battlefield (COP), commander's will continue to solely adhere to mission command, so that subordinates are allowed to make the decisions necessary to accomplish the commander's visualization of the end state.

At the foundation of acting first in the Objective Force Concept is information dominance. The Objective Force Concept outlines how it will facilitate the exploitation of information dominance:

> To act first, Objective Force Soldiers, leaders, and units must have information dominance. . . . . To translate information dominance into decisive outcomes, Objective Force platforms and systems must be capable of moving, shooting, and reengaging faster than the enemy. Target acquisition systems will see farther than the enemy in all conditions and environments. Units will be able to rapidly assess options, act first by understanding when and where they must transition between actions, and remain fully synchronized throughout execution.[45]

This paragraph does not clearly state what the level of involvement an operational level commander will play. It also remains unstated what tactical level of command decides to act and what level of involvement that command exercises in order to synchronize the subordinate units during the execution of the battle or operation.

According to the published concepts, the Objective Force will theoretically be able to push decision-making down to the lowest of levels and at the same time achieve the

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[44] Ibid., 7-8.
[45] Ibid., 8.

synchronization necessary to accomplish concepts like decisive operations and dominant maneuver. The *Concepts for the Objective Force* outlines how this will be done:

> The design is to deny the enemy any respite or opportunity to regain the initiative while Objective Forces operate at high operational tempo inside their opponent's decision cycle. In making well-informed decisions at the lowest levels, Objective Force units will operate faster than current units where decisions are more centralized. The force's agility and versatility will enable exploitation of opportunities as they occur and can generate opportunities to gain momentum. As subordinates report their actions, those reports are part of the COP. Elements of the force affected by the action learn of it, understand the impact, and can synchronize their actions - - self- synchronization.[46]

The final step is to finish decisively. Objective Force units finish decisively by destroying the enemy's ability to continue to fight and by achieving moral dominance quickly.[47] The Objective Force will do this by maneuvering to tactical and operational positions of advantage through which they will dominate the enemy and pursue subsequent campaign objectives.[48]

Although the idea of see first, understand first, act first, and finish decisively conceivably has applicability at the operational level of war also, the *Concepts for the Objective Force* explicitly states that it is the means to tactical success. However, the Objective Force will not simply be tactical level forces. It will necessarily include an operational level as the link to the strategic level. The *Concepts for the Objective Force* does state that "when coupled with Objective Force land campaign planning expertise, information superiority enable JFCs to see first, understand first, act first at the operational level."[49] How this will be implemented at the operational level in terms of command type is not clearly outlined however. An inference can be made that the current Objective Force concepts will use the framework of decentralized decision-making, or mission command, at both the operational and tactical levels.

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[46] Ibid.
[47] Ibid.
[48] Ibid.
[49] Ibid., 5. JFCs are Joint Force Commanders.

This inference is made all the more plausible and justifiable given the prediction that the levels of war will continue to become more compressed, with tactical actions having the potential of having strategic consequences.

> The power of web-based command and control systems to provide common situational understanding is compressing the strategic, operational, and tactical echelons. The expanded battlespace and reach of tactical units, provided by the capability to see and understand the enemy in a holistic sense, enables tactical echelons to employ strategic and operational assets with decisive effects. This reality is increasing the importance of the tactical level of war to strategic outcomes.[50]

Despite, or perhaps because of, the fact that tactical level actions will apparently have an increasingly important impact upon the strategic level, the stated goal of the Objective Force is to continue to implement mission command.

It is clear that the future force will increasingly rely upon technological innovation and invention to become smaller, more agile and lethal in order to operate in a much more distributed manner across the future battlefield. Technology will provide the Objective Force with the capabilities to accomplish the concepts of dominant maneuver, decisive operations, and precision engagement. The primary enabler required for the Objective Force to successfully conduct these concepts, which require a high degree of synchronization of forces, is that the force must achieve information superiority. Information superiority will allow the force to see and understand the battlefield through the COP in order to make better decisions, faster than the enemy. The army's stated method of command for the Objective Force is to rely to an even higher degree, and solely, upon mission command. Accordingly, decisions will be pushed down to the lowest levels and groups of subordinate units will theoretically "self-synchronize" their actions with each other.

[50] Ibid., 4.

CHAPTER FOUR

CONCLUSIONS AND RECOMMENDATIONS

The Objective Force will use technological innovations and inventions to achieve information superiority. Information superiority will tie sensors, shooters, and commanders together to achieve information dominance. Commanders will be able to synthesize information quickly and achieve situational understanding as events are occurring, in order to ultimately achieve decision dominance over the enemy.

James R. Beniger's book *The Control Revolution: Technological and Economic Origins of the Information Society* is instrumental in understanding what type of command will naturally be implemented unless a conscious, concerted, and deliberate effort is made to do otherwise. Although Beniger is discussing control and not command, there is a connection because he defines control as the purposive influence toward a predetermined goal.[1] In addition, he establishes that all living systems must exert some level of control in order to ensure that it is working toward its goal.[2]

The level of control that he discusses, and the reasons for control, can be correlated to the level of command involvement along the range of command that includes detailed and mission command. Control depends on information and activities involving information: information processing, programming, decisions, and communication.[3] Of these, information processing and communication are paramount because they allow a person or organization to compare the

[1] James R. Beninger, *The Control Revolution: Technological and Economic Origins of the Information Society,* (Cambridge, Massachusetts: Harvard University Press, 1986), 10, 35. The living system that Beninger focuses on is society. He describes how control, both in information processing and communication, has interacted with society.

[2] Ibid., 58-59. Beninger talks about processing information and making decisions in order to oppose entropy, or heat death. He defines a living system as having the following six properties: organization, metabolism and growth, responsiveness, adaptability, reproduction, and evolution.

[3] Ibid., 40, 434. Programming deals with the reason for controlling a system. It includes both the goals toward which a process is to be influenced and the procedures for processing additional information toward that end. Information processing allows a system to communicate information so that a comparison of a system's current state with its future goal can be made.

current state with the future goal for which the organization is being controlled.[4] The bottom line is that the level of control is dependant upon an organization's ability to process information.[5] It follows that if an organization has the capability to exert a high degree of control, ala detailed command, it will naturally do so.

One of the fundamental differences between detailed command and mission command revolves around who is expected, or allowed, to make decisions. In order to identify which type of command is best in the Objective Force during a major theater war, it is necessary to establish a definition of what makes a decision on the battlefield good. A good decision must have the following three characteristics: they must be timely, they must be based upon accurate and relevant information, and their underlying purpose must be focused on achieving the overall end state.[6]

As Robert R. Leonhard states, "in war, a good decision that comes five minutes late becomes a bad decision, or worse – no decision."[7] In order to exploit opportunities on the battlefield, decisions must be made quickly, before the situation changes, making the decision irrelevant. Additionally, making decisions faster than your opponent is the key to victory in the OODA cycle model. Of primary concern in the OODA cycle is making better decisions, faster than your adversary, over and over again. This will iteratively widen the situational understanding and decision gap between friendly and enemy forces, in that the enemy will continually be reacting to decisions imposed upon him.

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[4] Ibid.

[5] Ibid., 15.

[6] See Robert R. Leonhard. *Fighting by Minutes: Time and the Art of War.* With a foreword by Colonel James R. McDonough. (Westport, Connecticut: Praeger, 1994), 108-111; U.S. Army, *FM 6-0, Command and Control (DRAG Edition),* 1-10 to 1-11; Major General Russel L. Honore, "Battle Command," *Military Review*, September – October, 2002, 14. Honore talks about making qualitatively better decisions than an adversary. "Qualitatively better means a right decision, at the appropriate level, at the right time. Being better is not as simple as making decisions faster and more often than can an enemy."

[7] Leonhard, *Fighting by Minutes*, 108.

False or outdated information will lead the decision maker to develop an inaccurate understanding of the situation.[8] This will likely lead the decision maker to make a bad decision that is not grounded in reality. In order to make a good decision, the decision maker must have relevant and accurate information to achieve situational understanding.

The final characteristic of a good decision is that its underlying purpose must be focused on achieving the overall end state. This is a somewhat nebulous but necessary criterion.[9] Current army doctrine addresses this overall concept to a certain degree and ties in the two other requirements in stating that:

> Effective battle command demands decisions that are both timely and more effective than those of the enemy. Success often depends on superior information that enables superior decisions.[10]

What an effective decision is, is not defined. If effective means contributing a desired effect toward the end state, then current doctrine closely mirrors all the stated criteria for a good decision.[11] To be a good decision, it must meet all three criteria. If a decision is timely and based upon accurate and relevant information but ultimately fails to contribute toward the accomplishment of the overall end state, versus a decision that is aimed at achieving the end state, then that decision is a bad or irrelevant decision.

Rather than simply discount the use of detailed command in the future, it is important to reiterate why militaries adopted detailed command in the past. As was shown in chapter two, detailed command allowed commanders the ability to synchronize forces to a high degree. This is important because an army that is able to synchronize its forces will achieve the fullest synergistic potential of its forces and will gain a decided advantage over an opponent that fails to

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[8] The classic example is the French Army during the German invasion of 1940. See Alistair Horne, *To Lose a Battle: France 1940* (New York: Penguin Books, 1982), 424-467.

[9] For a discussion on the necessity of this criterion, see Shimon Naveh. *In Pursuit of Military Excellence: The Evolution of Operational Theory.* (Portland, Oregon: Frank Cass Publishers, 1997), 14-16. Naveh uses the term "cognitive tension" in discussing the focus of units toward the overall aim throughout the levels of war.

[10] U.S. Army, *FM 3-0,Operations*, 5-2.

[11] This is one of the definitions of "effective" from *Webster's Ninth New Collegiate Dictionary.* (Springfield, Massachusetts: Merriam-Webster Publishers, 1986), 397.

coordinate its subordinate units' actions. The increase in situational understanding brought about by information superiority will enable organizations to task organize quickly, maneuver and fight dispersed, with a high level of synchronization.[12]

In order to effectively use detailed command however, a commander must have the ability to visualize the battlefield, both prior to and during the execution of operations, in near-real time, in the same way that Roman commanders were able to do. The commander must also have the ability to clearly describe his concept and then direct his subordinate units, also in near-real time. If a commander is unable to do any of these for any reason, then the use of mission command will almost invariably be the better choice over detailed command. Even if these requirements have been met, it is not clear whether the use of detailed command is the best choice.

The U.S. Army is building a command and control system that has multiple, interconnected sensors, live video feeds, and automatic, multi-echelon data sharing that will meet the requirements established for the Objective Force.[13] This will allow commanders to visualize the battlefield accurately and in near real time. This visualization will be available throughout the Objective Force because the COP will be available at all levels.[14]

Who will have a better visualization of the battlefield during the execution of an operation in the Objective Force at both the tactical and operational levels? Who will be able to obtain the most timely and accurate understanding of the situation? At the lowest tactical levels it is difficult to imagine technological developments that will allow a higher echelon commander to achieve a higher or even similar degree of situational understanding of those "on the ground." No amount of networking or streaming video will ever replace the five senses of a human being.

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[12] U.S. Army, *Army Vision 2010*, 11.

[13] See Headquarters, Department of the Army, Training and Doctrine Command. *TRADOC Pamphlet 525-66: Military Operations, Force Operating Capabilities (Final Coordination Draft).* (Fort Monroe, Virginia: GPO, 30 July 2002), 8-20. Available online at http://www-tradoc.army.mil; idem. *Objective Force Battle Command Concept (Draft Version 3).* (n.p.: GPO, 7 June 2002), 13-21.

Also, because of the immediacy required in decision making at the lowest tactical levels, mission command should be used virtually exclusively at this level.[15] This will allow the lowest levels to use their initiative to achieve the higher commander's end state and to take advantage of opportunities or react to unforeseen circumstances quickly. Even militaries throughout history that effectively used detailed command at a higher level, like the Romans or the U.S. Navy ASW efforts in World War II, realized the necessity and importance of allowing the lowest tactical elements to make necessary decisions and take immediate actions.

At the operational level, the COP will assist the operational level commander to visualize a dispersed battlefield during the battle to a high degree. Although the networked concept is to achieve a Common Operational Picture, it would seem probable and natural that the operational commander would have more information available from a wider variety of sources than a tactical commander.[16] Even if this is not the case and information is disseminated to virtually all levels, an operational level commander and his staff would likely be able to process that information faster, more comprehensively and accurately than tactical level commanders.[17] It is therefore likely that the operational level commander will have a higher degree of situational awareness than lower echelon commanders in the Objective Force.[18]

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[14] Ibid., 8. This document states that the Objective Force will be "networked horizontally and vertically from [the] strategic to [the] tactical level."

[15] For an alternate, although probably unintentional and admittedly implicit, vision of the use of detailed command at the tactical level in the Objective Force, see Department of the Army. *Army Battle Command System*. Produced for PEOC3S by TRW. 18 min., 9:15 to 15:00.

[16] A COP will probably mean that a group of people will have the same information available about key components of battlespace awareness in a timely manner. The effect will be that they will share a common perception of the situation. See U.S. Department of Defense, Assistant Secretary of Defense (C3I) and Chief Information Officer, Command and Control Research Program. *Network Centric Warfare: Developing and Leveraging Information Superiority*, 2nd Edition (Revised). By David S. Alberts, John J. Garstka, and Frederick P. Stein. (Washington, D.C.: GPO, 2002), 240.

[17] This is a logical conclusion that stems from the assumption thathigher level commanders and their staffs will be both larger and more experienced.

[18] *FM 6-0* implies that only a commander can achieve true situational understanding (Figure 3-3). It does state that the ability to truly and clearly understand the situation is dependant upon experience, as well as education, intuition, and judgment. See U.S. Army, *FM 6-0, Command and Control (DRAG Edition)*, 3-15 to 3-16.

If the operational level commander has a better visualization of the battlefield and is able to communicate in near real time with lower echelon commanders, detailed command at the operational level would allow the entire operational force to fight at a higher operational tempo than the enemy by making decisions faster than that opponent. The operational commander in this scenario, using detailed command, would have a faster OODA cycle than an opponent whose commander was using mission command. More importantly, detailed command would allow a much higher degree of synchronization than a force adhering to mission command throughout the force.

Even if the COP is truly common and all levels are able to achieve the same level of situational understanding, it is not clear whether mission command would be more effective than detailed command. The ultimate question is who will make the best decisions in a future battlefield where all levels achieve the same degree of situational understanding through the COP?

FM 3-0 states that "experience, combined with situational understanding, provides the intellectual setting around which commanders visualize the operational design."[19] This stresses the importance of experience in visualizing the entire operation. Combining that visualization with decision making, *FM 3-0* states:

> The art of command lies in conscious and skillful exercise of command authority through visualization, decision making, and leadership. Using judgment acquired from experience, training, study, and creative thinking, commanders visualize the situation and make decisions.[20]

Gary Klein's book, *Sources of Power: How People Make Decisions*, establishes a concept he calls "recognition-primed decision making" or RPD.[21] The RPD model fuses two processes: the way decision makers size up the situation to recognize which course of action

[19] U.S. Army, *FM 3-0,Operations*, 5-13.
[20] U.S. Army, *FM 3-0,Operations*, 5-1 to 5-2.
[21] Gary Klein. *Sources of Power: How People Make Decisions*. (Cambridge, Massachusetts: The MIT Press, 2001), 17.

makes sense, and the way they evaluate that course of action by imagining it.[22] At the foundation of this concept is a heavy reliance upon experience.[23]

RPD is an especially useful concept in a time constrained environment. It relies upon the decision maker to develop a feasible course of action and then use a mental model to evaluate that course of action to identify weaknesses and find ways to avoid those weaknesses, thereby making the course of action stronger.[24] There is a trade off in using RPD however. Decision makers who use RPD select the first feasible course of action and implement it.[25] This contrasts with developing several courses of action and comparing them all to identify the best possible course of action.[26] Obviously making a decision quickly, even though it may not be the optimal decision, is probably better than making the best decision later.[27]

It is clear that commanders using RPD will make decisions faster than ones that are reliant upon developing, analyzing, and then selecting the best course of action. This concept fits well with the battle command concepts of the Objective Force which call for rapid decision making and a shift away from plan-centric operations.[28] It is also clear that RPD requires an experienced commander in order to conceive of a feasible course of action and then mentally evaluate it. Drawing a logical conclusion from this statement, it follows that the more experienced a commander is, the better at implementing RPD he will be.[29] In virtually every foreseeable instance, the higher level commander will be the most experienced commander. If an experienced operational level commander uses RPD to make a decision in a rapidly changing

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[22] Ibid., 24.
[23] Ibid., 287.
[24] Ibid., 30.
[25] Ibid., 20-21.
[26] Ibid., 19-21, 167. Klein, relying upon work done by Herbert Simon, calls this satisficing: selecting the first option that works. This is different from optimizing, which tries to come up with the best option.
[27] This concept is similar to George Patton's dictum that a good solution applied with vigor now is better than a perfect solution applied ten minutes later. See Charles M. Province. *Patton's One-Minute Messages: Tactical Leadership Skills for Business Managers*. (Novato, California: Presidio Press), 21.
[28] U.S. Army, *Concepts for the Objective Force*, v.
[29] Klein, *Sources of Power*, 147-175.

battlefield, and then implements his course of action by using detailed command, the entire force could be employed quickly and in a highly synchronized manner.

If we transform the future army into a fully interconnected, networked force, capable of instant or near real time communications in which there is a COP throughout the force, then we will likely achieve decision superiority. The use of mission command throughout the force to exploit this decision superiority is advocated by all official publications. However, the use of detailed command at the operational level, using the concept of battle command on the move, will theoretically be capable of making the best decisions because of an increased experience level. Detailed command is a viable command type because the operational commander will have the ability to visualize the battlefield in near real time, describe that visualization and then direct his subordinates nearly instantaneously. Detailed command, as it has throughout history, will be capable of synchronizing forces to achieve the fullest synergistic potential of the entire force. At the same time, detailed command at the operational level has the potential of increasing the overall tempo of the operations to achieve dominant maneuver with precision fires.

This assessment is based upon matching the Objective Forces' stated capabilities in accomplishing the future concepts such as dominant maneuver and precision engagement. As such, this assessment has disavowed anything less than information superiority and decision dominance. It would be conceited, presumptuous, and dangerous to think that the U.S. will always have information superiority over all of our adversaries in the future, even with all of the capabilities envisaged in the Objective Force. In an instance where an opponent achieves information parity or better over the U.S. Army, it is necessary to evaluate whether detailed command remains preeminent.

In his 2000 *Military Review* article, James J. Schneider introduced a new concept in warfare called cybershock.[30] This concept ties in the increasingly dispersed battlefield with the

[30] James J. Schneider. "Cybershock: A New Form of Warfare," *Military Review*, January – February 2000, 56.

requirement for information, and technology to communicate that information, in order to effectively command and control large, dispersed militaries.

> Cybershock in warfare causes paralysis by attacking the enemy's nervous system in the same way that maneuver causes exhaustion by defeating the opponent's metabolic system – his logistics. . . . Cybernetic paralysis drives an organized system into disorganization by destroying the coherence, connection and flow of information among the component parts of a complex system.[31]

Cybershock creates paralysis by attacking the command and control system of the entire military, either directly or indirectly. This can be accomplished in numerous ways such as denying the enemy of important information, by surprising the enemy, by attacking the command and control structure directly, and finally by operating at a high tempo of operations.[32]

Schneider goes on to point out that modern militaries are complex adaptive systems.[33] As such, they are capable of spontaneous self-organization.[34] The degree to which a military is able to self-organize is dependent upon the degree of freedom and the level of decision making authority that is pushed down to the lowest levels. Mission command implies a desire, and in fact demands, that the entire military organization self-organize at the lowest levels possible.[35] Obviously then, an army that adheres to detailed command is more vulnerable to cybershock than an army adhering to mission command.

In a future environment where the U.S. Army is unable to gain even information parity, the most effective course of action to combat the resultant cybershock is to implement mission command throughout both the tactical and operational levels of war. Even in an environment of information parity, the side that uses mission command most effectively could gain a decided decision advantage. This would be accomplished by pushing decision making down to the lowest

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[31] Ibid., 58.
[32] Ibid., 60.
[33] Ibid., 58-60.
[34] Ibid., 60.
[35] Ibid., 61. Schneider states "that overall systemic paralysis and disorganization can be off-set, up to a certain point, by self-organization and reorganization at lower levels of command. The German notion of *auftragstaktik*, for example, is based on the self-organizing ability of tactical units and local commanders."

levels in order to achieve decision dominance that was not totally reliant upon information processing throughout the entire military.

Which type of command is best for the Objective Force? The answer is neither and both, depending upon the situation. The army must prepare for the future by doing a number of things, most of which involve conceptual or mental shifts and not technological improvements.

First and foremost, current army doctrine should be changed to show that both types of command can be, and in fact are, used during the execution of operations. Currently, doctrine focuses almost exclusively on detailed and mission command's role during the development of a plan.[36] This will help to change the mindset of future leaders and assist them in transitioning from plan-centric to execution-centric operations, regardless of the type of command used.

In addition to recognizing both types of command, the army must also realize that different types of command can be employed at different levels of war. Tactical level units can use one type of command while at the same time a different type of command can be used at the operational level. This flexibility can even be extended to different areas of the battlefield or to different times or phases of the operation. The decision over which type of command to use should be situation driven, not pre-ordained by doctrine.

As stated previously, the natural human tendency is to exert a high degree of control, if the system is in place to do so. In other words, detailed command will naturally be adopted throughout the Objective Force unless a strong organizational emphasis is made to cultivate and inculcate mission command at tactical and operational levels. Because mission command will

[36] U.S. Army, *FM 6-0, Command and Control (DRAG Edition),* 4-1 to 4-16, 6-1 to 6-30. Chapter 6 of *FM-6-0* describes decisionmaking during execution. It states that: "Exercising C2 is dynamic and occurs through assessing, planning, preparing for, and executing military operations. While these activities are cyclical and continuous, they do not necessarily occur sequentially." Figure 6-1 in *FM 6-0* portrays the commander exercising battle command during the plan, prepare, and execute phase while continually assessing the operation. It goes on to describe execution decisions and adjustment decisions. Of those two, only the latter involves adjusting a plan during the execution of an operation. An adjustment decision can lead to three actions: reallocating resources, changing the concept, and changing the mission. Any of these would likely entail the commander visualizing, describing, and directing in order to accomplish those actions. In an almost 300 page manual, the discussion encompassing the adjustment decisions a commander must make during the execution of an operation consists of only 2 pages.

continue to be the most effective type of command for most operations, and throughout most levels of war, a concerted and focused effort must be made to ensure that an organizational climate exists to support it in the future. It is axiomatic that it is more difficult to build the climate of trust and mutual understanding necessary for effective mission command than it is to build a climate for detailed command. This is a key point because it is inconceivable for a military to be able to effectively use mission command after it has regularly used detailed command. It is, however, plausible for a military which regularly uses mission command to use detailed command as the situation dictates.

A cultural change will be necessary no matter what type of command is adopted. Even though the U.S. Army purportedly practices mission command currently, many theorists envision a much higher degree of freedom at the lowest levels. Network centric theories like Swarming postulate a concept of autonomous pods and clusters at the lowest levels that will overcome adversaries by attacking from many different directions and in many different ways.[37] Swarming, although at the extreme end of mission command implementation, is only one of many ideas for exploiting the information dominance gained by the Objective Force. Most other theories involve a greater devolution of decision making down to lower tactical levels than is currently present in the U.S. Army.[38]

The level of decentralization at the tactical level needed to fully exploit the Objective Force's networked capabilities requires a shift in the U.S. Army that allows tactical level units much wider latitude and freedom in accomplishing their missions. Mission command will continue to be preeminent at the tactical level. However, in order to maximize the potential power of the Objective Force, the army must realize that its current concept of what constitutes

[37] John Arquilla and David Ronfeldt. *Swarming & The Future of Conflict*. (Santa Monica, California: RAND, National Defense Research Institute, Office of the Secretary of Defense, 2000), vii, 21, 45-46, 48-49, 55-61.

[38] See Department of Defense, *Network Centric Warfare*, 160; U.S. Army, *Concepts for the Objective Force*, 8.

mission command is overly restrictive and does not allow for rapiddecision making and action taking needed to operate inside the enemies OODA cycle.

Finally, the U.S. Army must realize that there are two types of command available for use in the Objective Force. Discounting one, for whatever reason, reduces the overall effectiveness of the force by limiting the command options available. Mission command is, and will continue to be, the optimal choice throughout the spectrum of conflict at both the operational and tactical levels of war in almost all instances. There are potential scenarios, however, where detailed command could be a powerful tool in more effectively employing forces in the future. In an environment where the levels of war are blurred and tactical actions have strategic implications, and the force achieves information superiority, detailed command may be the best type of command to synchronize dispersed forces expeditiously.

The U.S. Army should adopt or tailor some of the insightful concepts formulated by the U.S. Joint Forces Command's J9 Joint Futures Lab. Rather than adhere to the conceptually restrictive idea of there being only two rigidly defined types of command, and the even more restrictive idea of only using one of them, the Joint Futures Lab has formulated the idea of adaptive command.[39] This concept is based upon the ability to react to uncertain and unforeseen situations quickly. This ability is made possible by shared understanding, pervasive creativity, and empowerment.[40] The concept of empowerment is persuasively described in *Joint Operational Warfighting* and is extremely applicable for the Objective Force at all levels.

> The principle of empowerment in no way suggests that future joint commanders can employ only decentralized command and control. The complex, uncertain environment of conflict demands a balanced approach to command, allowing for centralization or decentralization as required. There will be times when the joint force commander must orchestrate a given operation and restrict the actions of subordinates in order to achieve the desired effects. There will be other times when the commander's best option is to delegate critical decision-making to subordinates in order to allow them to exploit opportunity. Rather than vilifying one technique and clinging slavishly to another, JOW

[39] U.S. Joint Forces Command, J9 Joint Futures Lab. *Joint Operational Warfighting (JOW): Thoughts on the Operational Art of Future Joint Warfighting* (Draft), (Washington, D.C.: GPO, 15 August 2002), 43-51.

[40] Ibid., 45-48.

> calls for a flexible and balanced philosophy – one in which the level of decision making is adaptable to the mission, the terrain, the information flow, and the enemy situation. Experience teaches, however, that decentralized command and control cannot succeed without real empowerment of competent subordinates.[41]

The army should adopt this view of command in the Objective Force for it to be most effective. In this way, the army could tailor its command type dependant upon the situation that the force was presented with. In order to do this however, the Army needs to be capable of operating comfortably utilizing the entire range of command (see Figure 1). This requires a mental shift at almost every level of the force. Some lower levels will need to learn to willingly accept the use of detailed command when the situation dictates. More importantly and probably more difficultly, some higher levels will need to learn to empower subordinates in a way and to a degree that is not contemplated in today's army.

[41] Ibid., 48.

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